pooling everywhere because it is dependent on LNP capability. Therefore, when we begin to implement pooling at the national level, we will initially concentrate our implementation efforts in those areas in which all or most carriers are LNP-capable—*i.e.*, the top 100 MSAs and in areas where pooling trials have begun. Once thousands-block pooling is implemented in an area, LNP-capable carriers will only receive numbers in blocks of one thousand for all purposes, including the establishment of an initial footprint as well as for growth needs. Consistent with the Thousand Block Pooling Guidelines, carriers will be required to donate all unused or lightly-used blocks (*i.e.*, with ten percent or less contamination) to initially stock the pool.[360] Carriers that participate in pooling will not be required to meet utilization thresholds to obtain growth codes initially. We may, however, revisit the question of whether all carriers should be subject to meeting a utilization threshold to obtain growth codes if we find that such thresholds significantly increase numbering use efficiency.

a. Implementation Schedule

157. In the *Notice*, we acknowledged that thousands-block number pooling could only be implemented in a limited number of areas at any given time. We observed that, because LNP capability is mandatory in the largest 100 MSAs, the degree of deployment of LNP is greatest in switches located within the largest 100 MSAs.[361] Given the relationship of LNP implementation with thousands-block number pooling, we tentatively concluded that any deployment schedule for thousands-block number pooling should initially be tied to the largest 100 MSAs.[362] In addition, we sought comment on whether the implementation should be staggered, like the LNP implementation schedule, to include the largest MSAs in the first group, with implementation in smaller MSAs later.[363] Furthermore, we sought comment on whether we should establish specific criteria to justify a mandate of pooling in an area, or, to relieve an area from a pooling mandate.[364] We further sought comment on which entity, this Commission or a state commission, should decide whether to implement pooling in a given area.[365] In the alternative, we sought comment on whether state commissions (or another entity) could decide to opt into or opt out of an established implementation schedule for nationwide roll-out of pooling and also whether another entity should be permitted to make this decision when the state commission declines to do so.[366] We further sought comment on whether the choice to opt in or opt out of an

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[360] *See* Thousand Block Pooling Guidelines at § 3.0.

[361] *Notice*, 14 FCC Rcd at 10386. The Commission required wireline carriers in the largest 100 MSAs to implement LNP as of December 31, 1998, in switches that another carrier has requested be made LNP capable. *See* 47 C.F.R. section 52.23(b)(1). As of January 1, 1999, LECs may request LNP in other LECs' individual switches in areas outside of the largest 100 MSAs, to be provided no later than six months after receiving the request. CMRS carriers are not required to deploy LNP until November 24, 2002. 47 C.F.R. § 52.23(b)(2)(iv)(C) and (D).

[362] *Notice*, 14 FCC Rcd at 10386.

[363] *Id.* at 10390.

[364] *Id.* at 10387-88.

[365] *Id.* at 10387.

[366] *Id.*

established implementation schedule for the national pooling framework should be made on an entire MSA, an NPA within the MSA, or on a rate center by rate center basis.[367] Because carriers are only required to implement LNP if requested by another carrier subject to the requirements established by this Commission,[368] we sought comment on whether we have the authority, under the 1996 Act, to order LNP capability primarily for the purpose of thousands-block number pooling.[369] We also sought comment on whether we may delegate to other entities the authority to order carriers to implement LNP for number utilization purposes.[370]

158. Consistent with our tentative conclusion, we conclude that the rollout of thousands-block number pooling should first occur in NPAs that are located in the largest 100 MSAs.[371] We do so because it appears that the greatest benefits from pooling are achieved when all, or most, participating carriers are LNP-capable, and thus are able to participate in pooling.[372] We note that, although we are using the MSAs to generally identify where LNP is prevalent, implementation of thousands-block number pooling would occur in specific NPAs within those MSAs.[373] Moreover, because numbers can only be pooled among carriers using numbers in a given rate center, each rate center within the pooled NPA would have to have its own pool. We further clarify that where an NPA encompasses areas both inside and area outside of the qualifying MSA, pooling will be required only in those rate centers in the NPA which are a part of the MSA.

159. Most commenters also support a staggered roll-out schedule, which, similar to the LNP implementation schedule, includes NPAs within the largest MSAs in one group, with implementation in NPAs within smaller MSAs later.[374] Although most states and many carriers recommend that thousands-block number pooling be available for implementation immediately in all NPAs that are LNP-capable,[375] we find that a staggered rollout schedule is necessary,

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[367] *Id.* at 10390.

[368] *See* 47 C.F.R. § 52.23(b)-(c).

[369] Currently, our rules specify that only another carrier may request a LEC to provide number portability in a given switch. 47 C.F.R. § 52.23(b)(1).

[370] *Notice*, 14 FCC Rcd at 10386.

[371] *Id.* The majority of commenters also agreed with our tentative conclusion. *See, e.g.,* Cox comments at 15; GTE comments at 46; Nextel comments at 19; MediaOne at 23; U S West comments at 20; PrimeCo comments at 7; Ameritech comments at 37, 40; SBC comments at 73, 85-86; BellSouth reply comments at 12; USTA comments at 8, 9; ALTS comments at 23; U S West comments at 20; California Commission comments at 29.

[372] Qwest comments at 4; Time Warner comments at 7.

[373] *See* AT&T comments at 42, 44. We agree with the Colorado Commission that where a rate center is larger than the MSA, an alternative geographic boundary such as the NPA should be used. *See* Colorado Commission comments at 7.

[374] *See, e.g.* AT&T comments at 39; MCI WorldCom comments at 13; USTA comments at 9.

[375] Massachusetts Commission comments at 11; Massachusetts Department of Telecommunications and Energy, Attachment A, Outline of State Response to Numbering NPRM at 13, 14; Texas Commission comments at 23; (continued....)

primarily because an overload of the telecommunications network may cause network disruptions when carriers' Service Control Points (SCPs) capacity has been depleted.[376] Based on input we received from NeuStar, the current pooling administrator of ongoing state trials, we also tentatively conclude that the rollout should encompass a maximum of three NPAs in each NPAC region per quarter.[377] The current Pooling Administrator of the ongoing state trials, NeuStar, Inc., has informed us that the timeframe for completion of the necessary administrative work to enable an NPA to be ready to pool is at least three months.[378] We believe that confining the rollout of pooling to three NPAs per NPAC region per quarter will ensure that our rollout schedule does not strain resources of the national thousands-block number Pooling Administrator and is undertaken smoothly. Also, a staggered roll-out will provide carriers time to upgrade or replace their SCPs and other components of their network, as necessary, if the increased volume of ported numbers as a result of pooling requires them to do so.[379] We, however, do not see the need to have three-month intervals between each phase of the staggered rollout, as suggested by Ameritech,[380] or the other more limited roll out schedules proposed by some commenters.[381] Since we believe that the benefits of thousands-block number pooling should be realized as soon as possible, we conclude that we should implement pooling in the maximum number of NPAs that are manageable.

160. In our determination of which NPAs should be placed on the initial roll-out schedule, we decline to establish specific criteria at this time.[382] We acknowledge that the use of such criteria would provide us with a more exact and localized picture regarding the suitability of pooling in each NPA. We conclude, however, that it would be extremely difficult for us to gather the necessary, underlying information that the application of such criteria would require, as well as incorporate it in a timely manner on the rollout schedule to give carriers adequate notice that pooling will be implemented in an NPA in which they provide service.[383]

(Continued from previous page)
North Carolina Commission comments at 12; New Hampshire Commission comments at 14. *See also* Bell Atlantic comments at 24; Cox comments at 15.

[376] ALTS comments at 25; Ameritech comments at 43. An SCP is a database in the public switched telephone network that contains information and call processing instructions needed to process and complete a telephone call. The network switches access an SCP to obtain such information.

[377] *See* Letter from Leonard S. Sawicki, NeuStar, to Magalie Roman Salas, FCC, dated December 21, 1999.

[378] *Id.*

[379] ALTS comments at 25; Ameritech comments at 43.

[380] Ameritech comments at 37, 40.

[381] *See, e.g.*, Ameritech comments at 37, 40; AT&T comments at 44 (one NPA a month per NPAC region); MCI WorldCom comments at 12 (two NPAs a month per NPAC region); USTA comments at 18, 19 (one NPA a month per NPAC region); Letter from Elridge A. Stafford, US West, to Magalie Roman Salas, FCC, dated March 9, 2000 (two NPAs per quarter per region).

[382] *See* Ameritech comments at 38, 44; BellSouth comments at 22; GTE comments at 44.

[383] Maine Commission comments at 21.

161. Although we will not commence national thousands-block number pooling implementation until we select a thousands-block number Pooling Administrator, we seek to give carriers and states notice of how the national rollout will be conducted. We will establish a national rollout schedule that will be divided in three-month segments, with the first round of implementation beginning nine months after the selection of a pooling administrator.[384] The schedule for each quarter will contain three NPAs from each of the seven NPAC regions that are within the largest 100 MSAs.[385] Thus, we anticipate that at least twenty-one NPAs will be pooled each quarter.[386] Our determination of which NPAs should be placed on the initial rollout schedule will be based on three categories of NPAs. These categories include: 1) NPAs that were initially pooled or scheduled to be pooled pursuant to our delegations of pooling authority to state commission; 2) jeopardy NPAs in the largest 100 MSAs which have a life of one year or more; 3) new NPAs. Consistent with the findings in our delegation orders that the NPAs targeted by these states will benefit from pooling, we conclude that our rollout schedule should first include NPAs that are pooled or slated to be pooled by state commissions.[387] We also agree with commenters who recommend that the initial rollout schedule should focus on jeopardy NPAs that are within the largest 100 MSAs.[388] We further clarify that in NPAs that are within the largest 100 MSAs that receive an overlay NPA, both the original and overlaid NPAs shall be subject to pooling. However, because NPAs that are created as a result of a geographic split are essentially new NPAs with a geographic identification that is different from that of the original NPA, we do not require, but will permit, new NPAs that result from a geographic split to be pooled at the same time.

162. The initial rollout schedule will also include jeopardy NPAs from within the largest 100 MSAs, along with NPAs from state-ordered pooling trials. Furthermore, we conclude that NPAs that will exhaust in less than a year, based on the most current quarterly forecast issued by the NANPA at the time the quarterly schedule is established, will not be treated as priority NPAs for pooling purposes.[389] We find that the benefit of the limited life extension of the NPA that may be achieved by implementing pooling in NPAs with only a small

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[384] We will announce each round of implementation by *Public Notice* at least six months prior to the effective date.

[385] Additional NPAs in the largest 100 MSAs in a particular LLC region would be eligible for pooling implementation despite the existence of a pooled NPA within that LLC region. Because each NPAC region does not have the same number of large MSAs, we will, at a later date, modify our rollout plan per NPAC region to ensure that the NPAs in the largest MSAs are pooled first.

[386] This would mean that 84 NPAs would be pooled annually.

[387] *See California Delegation Order,* 14 FCC Rcd at 17490-96; *Connecticut Delegation Order* at ¶¶ 12-24; *Florida Delegation Order,* 14 FCC Rcd at 17510-16; *Maine Delegation Order,* 14 FCC Rcd at 16451-57; *Massachusetts Delegation Order,* 14 FCC Rcd at 17451-57; *New Hampshire Delegation Order* at ¶¶ 24-34; *New York Delegation Order,* 14 FCC Rcd at 17470-76; *Ohio Delegation Order* at ¶¶ 27-39; *Texas Delegation Order* at ¶¶ 11-23; *Wisconsin Delegation Order* at ¶¶ 32-44.

[388] Cox comments at 15; MediaOne comments at 23; Nextel comments at 19; PrimeCo comments at 7.

[389] AT&T comments at 42, 44.

number of NXXs still available would not likely exceed the costs.[390] We, however, reject the other parameters for the exhaust projection or life extension of an NPA, as suggested by some parties[391] because we conclude that these parameters are not realistic, given the magnitude of area code exhaust occurring throughout the nation, as evidenced by the fact that approximately 23 percent of the total number of NPAs nationwide are in jeopardy.[392] Moreover, we believe that the cost savings from delaying area code relief for even just two years, as in the 847 NPA in Illinois, wherein pooling extended the life of the NPA from 18 months to three and a half years, represents a substantial benefit to consumers, businesses, and state commissions.[393]

163. Furthermore, we are sensitive to concerns that a national pooling framework will not provide states with the flexibility to delay the implementation of pooling in NPAs within their states.[394] Therefore, we will permit states to choose to opt out of the rollout schedule on a temporary basis by informing the Pooling Administrator of their decision three months prior to the rollout date.[395] The choice to opt out must be made on an NPA-wide basis. We emphasize, however, that a state does not have the option to opt out of our requirement to conform to the standards of the national program in the operation of an ongoing pooling trial.

164. In addition, to serve the needs of states outside of the top 100 MSAs which believe that pooling would be beneficial in an NPA within their state, we will consider petitions to opt in to the national pooling rollout schedule.[396] We will accommodate such requests, however, in instances where space is available on the schedule due to an opening created by a state's opting out, or in demonstrated special circumstances, if the Pooling Administrator can accommodate the request in addition to the twenty-one scheduled implementations. Similar to our requirements for a state to justify its request for pooling authority prior to the implementation of national pooling, a state choosing to opt in must demonstrate that: 1) an NPA in its state is in jeopardy, 2) the NPA in question has a remaining a life span of at least a year, and 3) the

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[390] AT&T comments at 43; SBC reply comments at 17.

[391] U S West comments at 21 (three-year exhaust projection); SBC reply comments at 17 (two-year exhaust projection and three to five year life extension achieved); GTE comments at 40 (5 year life extension achieved).

[392] Currently, 72 of the 317 total NPAs in the United States are in jeopardy. This information was compiled based on data from the following Internet cites: <http://www.nanpa.com>; <http://www.lincmad.com>; and <http://www.census.gov>.

[393] *See* Ganek, *Leveraging LNP*, Telephony, February 7, 2000.

[394] Ad Hoc comments at 5; Connecticut Commission comments at 5; Maine Commission comments at 22; Massachusetts Commission comments at 12; New Hampshire Commission comments at 15; Ohio Commission comments at 30.

[395] Nextlink, however, argues that states should be required to petition for a waiver to opt out. *See* Nextlink comments at 10. We see no need to impose such an onerous requirement in this instance, given the large number of states that are eager to commence pooling in NPAs in their state.

[396] *See* Citizens Util. Bd. *et al.* comments at 11; Connecticut Commission comments at 5; Maine Commission comments at 19; New York Commission comments at 13; Small Business Alliance comments at 10.

majority of wireline carriers in the NPA are LNP-capable.[397] We will also consider state requests to opt into the national pooling rollout schedule where a state demonstrates special circumstances. We decline to determine at this time what such "special circumstances" may include, but will consider such requests on a case-by-case basis. The decision to opt in would only be on an NPA-wide basis. Although some parties oppose the ability of states that are not in the largest 100 MSAs to opt in to our initial rollout schedule for thousands-block pooling, we conclude that such flexibility is necessary in light of the diverse numbering conditions present in each state.[398]

165. To permit a greater level of state participation in the choice of the NPAs which will be pooled,[399] we will also permit state commissions to substitute the NPA listed in the rollout schedule with an alternative NPA, as long as the substitute NPA has a life span of at least one year and is located within one of the top 100 MSAs. To exercise this option, the state must inform the thousands-block number Pooling Administrator within 15 days of the release of the roll out schedule for that quarter. We will not depart, however, from our default deployment schedule based on the largest 100 MSAs to accommodate jeopardy NPAs outside the largest 100 MSAs, as some commenters argue we should.[400] We believe that the greater demand for numbering resources from competitive forces within the top 100 MSAs persuades us to focus the thousands-block number Pooling Administrator's limited resources on these areas first, before moving on to areas outside the top 100 MSAs. We believe these provisions will provide an adequate degree of flexibility in our national thousands-block pooling plan.

166. We also require the thousands-block number Pooling Administrator, once selected, to establish the initial rollout schedule and submit it to the Common Carrier Bureau for approval within 60 days after being selected. Pursuant to this task, the selected Pooling Administrator must, as an initial task upon its appointment, identify the largest 100 MSAs within each NPAC region, note the pooling trials initiated pursuant to delegated authority from the Commission, and identify the jeopardy NPAs, by NPAC region, which are scheduled to exhaust within one year. Moreover, the Pooling Administrator shall submit to the Common Carrier Bureau the roll out schedule for each subsequent quarter at least 90 days prior to the effective date of that schedule.

b. Implementation Timeframe

167. In the *Notice* we recognized that the time needed to implement thousands-block number pooling is dependent on a number of variables, including the extent of LNP deployment,

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[397] Some parties support the opt in approach for these states provided a lengthy analysis is not required. *See* North Carolina Commission comments at 13; Small Business Alliance comments at 10; Citizens Util. Bd. *et al.* comments at 7, 28; Maine Commission comments at 22.

[398] ALTS comments at 24.

[399] SBC comments at 73, 85-86; MCI WorldCom comments at 13-14.

[400] Nextel comments at 19; MediaOne comments at 23. In many instances, the lack of LNP-capability in these areas would prevent the establishment of an effective thousands-block number pool.

the provisioning method chosen, compatibility of service providers, operational support systems, selection of a Pooling Administrator, the need for enhancements to switches, SCPs, and other service provider systems, and availability of necessary hardware and software changes from vendors. We identified the specific pooling administration tasks that needed to be completed, including the development of Pooling Administration guidelines, selection of a Pooling Administrator, and development by the Pooling Administrator of an automated system for allocation of pooled number resources, built according to industry-supplied specifications and requirements. We further discussed the technical tasks required to implement thousands-block number pooling, which include the selection of a pooling deployment method, development and deployment of enhancements to the NPAC SMS to accommodate pooling, development of switch requirements, and system testing. Lastly, we listed the tasks that service providers, together with equipment vendors, must accomplish to achieve thousands-block number pooling. These tasks include modifications to service provider LSMSs and SCPs, enhancements to Service Order Administration systems (SOAs) and operations support systems; enhancements to switches, and subsequent testing. We also sought comment on the NANC Report's estimate that thousands-block number pooling could be implemented within 10 to 19 months from a regulatory order.[401]

168. We observe that a number of key pre-pooling activities, including the deployment of LNP throughout the largest 100 MSAs and the development of the Thousands Block Pooling Guidelines regarding the administration of thousands-block number pooling, have already been completed. Moreover, the NANPA and the NANC have been engaged in an ongoing analysis of current and future numbering needs. In addition, the selected thousands-block number Pooling Administrator for the ongoing state pooling trials, NeuStar, Inc., has announced the activation in July 2000 of LNP software that will facilitate the transfer of large ranges of numbers as a single message through a data formatting method known as Efficient Date Representation (EDR).[402] Although we do not endorse the adoption of this particular software at this time, we believe that the incorporation of EDR in such software is significant because it will reduce the strain on the network from the large volume of number porting that is likely to occur once thousands-block number pooling is implemented nationally. It is also our understanding that other entities could also develop pooling software with this EDR feature. Furthermore, because pooling is already underway in certain NPAs, we believe that a long lead time is not necessary to iron out significant technical issues. Thus, we conclude that the implementation time frame for initiating thousands-block number pooling should be no longer than nine months after the date on which the Pooling Administrator is selected. Although several carriers contend that a longer

[401] *See* NANC Report at § 5.3.3.

[402] *See* NeuStar, Response to Frequently Asked Questions Regarding Number Pooling, November 17, 1999, *available at* <http://www.nanpa.com>.

implementation time frame is necessary,[403] we find that, because much of the prerequisite work has been done, the shorter time frame is sufficient and appropriate.[404]

2. Delegations of Authority for Pooling to State Commissions

169. To enable consumers to receive the benefits of thousands-block number pooling as soon as feasible, we will continue to grant states authority to implement thousands-block number pooling on an individual basis. Therefore, subsequent to the release of this *Report and Order*, the Common Carrier Bureau will issue its determinations on pending state petitions requesting pooling authority.[405] As indicated in our orders delegating pooling authority to state commissions, the national thousands-block number pooling framework, including the technical standards and pooling administration provisions, will supersede these interim delegations of authority to state commissions.[406] Furthermore, state commissions receiving new delegations of pooling authority from us must conform to the national framework. We agree with commenters who state that uniform standards for thousands-block number pooling are necessary to minimize the confusion and additional expense related to compliance with inconsistent regulatory requirements.[407] We thus seek to maintain uniformity in the implementation of thousands-block number pooling on a nationwide basis. Moreover, our existing delegations of pooling authority to state commissions will continue until national pooling implementation occurs, provided they comply with our national pooling framework. We recognize, however, that pooling trials already underway may not conform to the standards set forth herein, and therefore, we give state commissions until September 1, 2000, at the latest, to bring their pooling trials into conformity with the national framework set forth herein.

170. Similar to the procedure employed in our delegations of authority to implement number conservation measures, including thousands-block number pooling, states seeking such authority must individually petition us for such authority. We also continue our delegation of authority to the Common Carrier Bureau to rule on such petitions for additional delegation of

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[403] Bell Atlantic comments at 25 (16 months plus one year for all carriers)); U S West comments at 22 (18 months); Ameritech comments at 42, 43 (18 months); USTA comments at 8 (19 months); BellSouth reply comments at 12 (27 months).

[404] Several states have received delegated authority to implement thousands-block number pooling. We believe that most, if not all technical issues will be resolved in these trials.

[405] As of March 30, 2000, the following states have pending petitions for additional delegated authority to implement number conservation measures before the Common Carrier Bureau: Arizona, Colorado, Georgia, Indiana, Iowa , Kentucky, Missouri, Nebraska, North Carolina, Oregon, Pennsylvania, Tennessee, Utah, Virginia, Washington.

[406] *See, e.g., California Delegation Order,* 14 FCC Rcd at 17490-96; *Connecticut Delegation Order* at ¶¶ 12-24; *Florida Delegation Order,* 14 FCC Rcd at 17510-16; *Maine Delegation Order,* 14 FCC Rcd at 16451-57; *Massachusetts Delegation Order,* 14 FCC Rcd at 17451-57; *New Hampshire Delegation Order* at ¶¶ 24-34; *New York Delegation Order,* 14 FCC Rcd at 17470-76; *Ohio Delegation Order* at ¶¶ 27-39; *Texas Delegation Order* at ¶¶ 11-23; *Wisconsin Delegation Order* at ¶¶ 32-44.

[407] AT&T comments at 37-40; SBC comments at 80; Nextlink comments at 10.

numbering authority when no new issues are raised.[408] Furthermore, to ensure that pooling is implemented in areas where it has the potential to be most beneficial, we require that states include a showing of specific criteria in their petitions for pooling authority. Each petition must demonstrate that: 1) that an NPA in its state is in jeopardy, 2) the NPA in question has a remaining life span of at least a year,[409] and 3) that NPA is in one of the largest 100 MSAs, or alternatively, the majority of wireline carriers in the NPA are LNP-capable. We, however, recognize that there may be "special circumstances" where pooling would be of benefit in NPAs that do not meet all of the above criteria, and we may, thus, authorize pooling in such an NPA upon a satisfactory showing by the state commission of such circumstances. To the extent that the pending state petitions do not demonstrate that the state possesses the criteria we require for future delegations of pooling authority, the state commission must supplement its existing filing with the Common Carrier Bureau within 30 days of release of this *Report and Order*. Although our national pooling framework implements pooling on an NPA basis within the largest 100 MSAs, we will continue to grant states interim pooling authority in a single MSA in their state. A state may expand pooling to another MSA only after having implemented pooling in the initial MSA and after allowing carriers sufficient time to undertake necessary steps to accommodate thousands-block number pooling, such as modifying databases and upgrading switch software.

171. Consistent with our statements in the delegation orders, we reiterate that, to ensure that consumers are never foreclosed from exercising their choice of carrier because that carrier does not have access to numbering resources, state commissions must take all necessary steps to prepare an NPA relief plan when it seeks to implement a pooling trial in an NPA which is in jeopardy. Area code relief is ultimately a federal question, although we have delegated to states authority to handle these matters. It is our policy that no carriers should be denied numbering resources simply because needed area code relief has not been implemented. A number of carriers have raised concerns in this proceeding that some states may not be developing and implementing area code relief plans in a timely manner. We are troubled by these allegations, and we will closely monitor these situations to ensure that federal numbering policies are followed. We also emphasize that only those carriers that have implemented LNP capability shall be subject to pooling, and a state commission does not have the authority to require LNP capability solely for the purpose of being able to participate in pooling. Moreover, non-LNP capable carriers operating in NPAs that are subject to pooling shall have the same access to numbering resources as they had prior to the implementation of pooling. States implementing pooling must also ensure that they provide carriers with an adequate transition time to implement pooling in their switches and administrative systems. In addition, because our national cost recovery plan cannot become effective until national pooling implementation occurs, states conducting their own pooling trials must develop their own cost recovery scheme for the joint and carrier-specific costs of implementing and administering pooling in the NPA in question. The individual state cost-recovery schemes, however, will transition to the national cost-recovery plan when it becomes effective. As we determined in our delegation orders, states

[408] *Pennsylvania Numbering Order*, 13 FCC Rcd at 19030-31; *see also Texas Delegation Order* at ¶ 5.

[409] *See supra* ¶ 164.

must ensure that the costs of number pooling are recovered in a competitively neutral manner, pursuant to section 251(e)(2) of the Act.[410]

3. Thousands-Block Number Pooling Standards

a. Background

172. As we explained above, thousands-block number pooling involves the allocation of blocks of sequential telephone numbers within the same NXX code to different service providers, and possibly different switches, within the same rate center. In the future, allocations will be accomplished via a Pooling Administrator,[411] who coordinates the allocation of thousands blocks to a particular service provider with the NPAC SMS.[412] Under the current system, entire NPA-NXXs (10,000 numbers) are allocated to, and therefore associated with, a given switch or carrier. Thousands-block number pooling requires modifying the association between an NPA-NXX and the service provider for the purpose of routing calls.[413] Once the association between the NPA-NXX code and the service provider is modified for purposes of call routing, an alternative to using the first six digits of the called number to route the call must be found.

173. Since the release of the *Pennsylvania Numbering Order*, the telecommunications industry has developed detailed guidelines governing the technical and administrative functioning of thousands-block number pooling. To implement thousands-block pooling, the industry has proposed employing the Intelligent Network/Advanced Intelligent Network (IN/AIN) system used for LNP.

174. The Committee-T1, sponsored by the Alliance for Telecommunications Industry Solutions (ATIS), has drafted detailed technical requirements (T1S1.6 Thousands-Block Number Pooling Technical Requirements) for thousands-block pooling.[414] The T1S1.6 Thousands-Block Pooling Technical Requirements address number pooling within an existing rate center within an NPA, utilizing the LRN method for LNP.[415] The T1S1.6 Thousands-Block Number Pooling

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[410] *See California Delegation Order,* 14 FCC Rcd at 17494-95; *Connecticut Delegation Order* at ¶ 20; *Florida Delegation Order,* 14 FCC Rcd at 17513-14; *Maine Delegation Order,* 14 FCC Rcd at 16456-57; *Massachusetts Delegation Order,* 14 FCC Rcd at 17454-55; *New Hampshire Delegation Order* at ¶ 33; *New York Delegation Order,* 14 FCC Rcd at 17474-75; *Ohio Delegation Order* at ¶ 35; *Texas Delegation Order* at ¶ 19; *Wisconsin Delegation Order* at ¶ 40.

[411] *See supra* ¶ 118.

[412] *Id.*

[413] Historically, geographic numbers are assigned on an NXX code basis and associated with a specific switch and the network address to which the call must be routed is embedded in the first six digits (NPA-NXX) of the called number. With thousands-block number pooling, all 10,000 numbers available in the NXX code are allocated within one rate center, but are allocated to multiple service providers in thousand number blocks, instead of to one particular service provider. Therefore, with thousands-block number pooling, participating carriers share resources from NXX codes rather than receiving an entire NXX code at a time.

[414] *See infra* ¶ 181.

[415] *See* T1S1.6 Thousands-Block Number Pooling Technical Requirements at 1.

Technical Requirements also define the Switching System, Number Portability Database, and other requirements for thousands-block number pooling in LNP-capable wireline networks.[416] Moreover, the T1S1.6 Thousands-Block Number Pooling Technical Requirements describe the network prerequisites that must be met for thousands-block number pooling to function properly,[417] thousands-block number pooling technical requirements, and network impacts of thousands-block number pooling.[418]

175. As stated above, an LRN is a unique ten-digit number assigned to each central office switch to identify each Point of Interconnection in the network for call routing purposes.[419] The LRN then serves as a network address. The first six digits of the LRN (*i.e.*, the NPA-NXX) are used to route calls to numbers that have been ported.[420] A number is ported when a carrier other than the carrier assigned the NPA-NXX associates its LRN with the phone number for routing purposes, and this same carrier is responsible for terminating the call to the ported number. When an individual telephone number is ported, a record associating the ported number with the LRN of the appropriate service provider's switch is created and stored in the former carrier's LNP SCP database, via downloads from the local Service Management System (SMS).[421] Any service provider routing a call to the ported number would do so by querying the database to determine the LRN that corresponds to the dialed telephone number, and routing the call to the switch identified by that LRN. The LRN architecture, therefore, provides a practical alternative to using the first six digits of the called number to route the call.[422]

176. The LRN database structure can be used to route calls to customers who have been assigned telephone numbers from a pool, because, just like with ported numbers, the NPA-NXX of a pooled number no longer necessarily indicates the switch or service provider associated with the service. To facilitate call routing when LRN LNP is utilized for number

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[416] *Id.* at i.

[417] *See id.* at 2-3.

[418] *See generally* T1S1.6 Thousands-Block Number Pooling Technical Requirements.

[419] *See generally* ATIS INC Location Routing Number Assignment Practices at 2 (July 13, 1998). INC documents are available at <http://www.atis.org>. The INC, sponsored by ATIS, has detailed the criteria to be considered when a service provider selects and assigns an LRN. *Id. See also* Telephone Number Portability, *Second Report and Order*, 12 FCC Rcd at 12287.

[420] ATIS INC Location Routing Number Assignment Practices at 2 (July 13, 1998). As discussed above, telephone numbers in the United States are composed of a 3-digit numbering plan area code (NPA), a 3-digit central office code (NXX), and a 4-digit line number.

[421] An SMS is a database or computer system not part of the public switched network that, among other things: (1) interconnects to an SCP and sends to that SCP the information and call processing instructions needed for a network switch to process and complete a telephone call; and (2) provides telecommunications carriers with the capability of entering and storing data regarding the processing and completing of a telephone call. *Telephone Number Portability First Report and Order*, 11 FCC Rcd at 8402 n.288. Typically, the information contained in an SCP is obtained from the SMS. *Id.*

[422] *See* INC Number Pooling Report at § 5.1.

pooling, the entire population of pooled numbers in the pooling area, and associated LRNs, must be stored in all of the LNP SCP databases that service providers use to store LRN information for numbers ported from their networks.[423] Thus, thousands-block number pooling can only be implemented where LRN LNP has been deployed.

177. When a number is ported, carriers must utilize software in the NPAC system to download and store the telephone number and associated LRN. Thousands-block number pooling can be performed with NPAC Release 1.4, 2.0 or 3.0.[424] NPAC Release 1.4 is a customized software release for the Illinois pooling trial,[425] which stores data in carriers' SCP database one record at a time.[426] NPAC Release 3.0, which is scheduled for testing by the NPAC in June 2000, and will be released to service providers in July 2000, includes efficient data representation (EDR).[427] EDR allows an LRN to be associated with a block of one thousand numbers as a single record. Because EDR allows one thousand numbers to be downloaded and stored in a service provider's database as a single record, instead of one-thousand records, it is expected to significantly extend a carrier's SCP capacity for thousands-block number pooling.

178. In the *Notice*, we sought comment on whether we should adopt the T1S1.6 proposed technical requirements for thousands-block number pooling as the standard for a national pooling architecture, or in the alternative, whether we should direct the NANC to recommend technical standards for thousands-block number pooling once such standards have been adopted by the American National Standards Institute (ANSI).[428] In addition, we sought comment on whether there are any technical issues with respect to thousands-block number pooling that have not been identified, such as potential impacts on private branch exchange equipment, or that remain to be resolved, and whether it is necessary for the Commission to direct or request resolution of these issues.[429]

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[423] *See* NANC Report at § 5.6.1; *see also* INC Number Pooling Report at § 5.3.

[424] NeuStar, Response to Frequently Asked Questions Regarding Number Pooling, November 17, 1999, *available at* <http://www.nanpa.com>.

[425] NPAC Release 1.4 was specifically designed for the Mid-West Regional LLC's use in the 847 area code in Chicago, Illinois. Currently, Release 2.0 (with NPAC Release 1.4 capability) is available throughout the United States. *See* NeuStar, Response to Frequently Asked Questions Regarding Number Pooling, November 17, 1999, *available at* <http://www.nanpa.com>.

[426] NeuStar, Response to Frequently Asked Questions Regarding Number Pooling, November 17, 1999, *available at* <http://www.nanpa.com>.

[427] According to NANPA, NPAC Release 3.0 has been authorized for use in all seven LLCs. *See* NeuStar, Response to Frequently Asked Questions Regarding Number Pooling, November 17, 1999, *available at* <http://www.nanpa.com>.

[428] *Notice*, 14 FCC Rcd at 10400.

[429] *Id.*

179. The INC has also drafted guidelines relating to the duties of the Pooling Administrator and entities requesting numbers from the Pooling Administrator.[430] The INC Pooling Guidelines propose an architecture in which a Pooling Administrator functions essentially as another carrier, requesting numbering resources from the NANP in order to maintain a sufficient inventory of thousands blocks for allocation to carriers within a rate area.[431] Carriers desiring blocks of numbers within a rate area request those blocks from the Pooling Administrator, rather than the NANPA.[432] Under these guidelines, numbering resources will be available for assignment from both contaminated and uncontaminated thousands blocks contained in the industry inventory pool.[433] Where thousands-block pooling has not been implemented, or is not in use by a service provider, the service provider must continue to apply directly to the CO Code Administrator for numbering resources.[434]

180. In the *Notice*, we sought comment on whether this arrangement should be the model for thousands-block number pooling administration.[435] We also sought comment on whether this general method of administration satisfies parties that may be taking numbers in thousands blocks from a pool as well as those that continue to take whole NXXs. In particular, we asked whether this model sufficiently addresses concerns about the impartial administration of the numbering resource.[436]

b. Discussion

181. As we stated earlier, we believe that uniform technical requirements are essential for the successful rollout of thousands-block number pooling. In this regard, several parties recommend that we adopt the T1S1.6 Technical Requirements for Thousands-Block Number Pooling.[437] The T1S1.6 Technical Requirements provide a comprehensive and an informative reference of the technical requirements for thousands-block number pooling implementation in LNP-capable wireline networks. These requirements are the result of an extensive industry effort and represent a broad-based consensus of various industry segments. Therefore, we adopt the T1S1.6 Technical Requirements as the technical standard for a national thousands-block number pooling mechanism.

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[430] *See* Thousand Block Pooling Guidelines § 1.0.

[431] *Id.* at §§ 5.0, 8.0.

[432] *Id.* at §§ 5.3(a), 9.0.

[433] *Id.* at § 3.1.

[434] *See id.* at § 1.0. *See also*, CO Code Assignment Guidelines. Service providers requiring an entire NXX code (10,000 consecutive numbers) to satisfy a single customer request would obtain these numbers from the Pooling Administrator, not the CO Code Administrator. Thousand Block Pooling Guidelines at § 3.2.

[435] *Notice*, 14 FCC Rcd at 10401.

[436] *Id.* at 10401-02.

[437] *See* PrimeCo comments at 8; AT&T comments at 49; OPASTCO comments at 7; USTA comments at 10.

182. We agree with many service providers and the NANC that the inclusion of EDR in the pooling software used for thousands-block number pooling is critical for a nationwide pooling architecture.[438] Thousands-block number pooling requires carriers to modify significantly the manner in which they account for their inventory of telephone numbers, including changing their Operations Support Systems (OSSs) and retraining their staff. With a national thousands-block pooling rollout, we envision the porting of a large volume of thousands blocks. As stated above, we do not endorse at this time the adoption of NPAC 3.0 as the software for the national thousands-block number pooling architecture, but we believe that the incorporation of EDR in such software, or in thousands-block number pooling software developed by other entities with this EDR feature, is significant because it will reduce the strain on the network from the large volume of number porting that is likely to occur once thousands-block number pooling is implemented.

183. We also conclude that the nationwide implementation of thousands-block pooling requires detailed guidelines governing its administration. The INC has drafted detailed guidelines and specifications describing the procedures to be followed for the administration of thousand-block number pooling.[439] Several commenters support the INC Thousand Block Pooling Guidelines as the model for thousands-block number pooling administration.[440] Other parties, however, express concern about the industry drafting these guidelines and a possible competitive disadvantage to CLECs based on the premise that they are drafted to favor incumbent LECs.[441] Upon our review of the Thousand Block Pooling Guidelines, we believe that the administration model that the INC has articulated sufficiently addresses concerns about the neutral administration of the numbering resource. We also believe that this model does not discriminate between service providers that may be taking numbers in thousands blocks from a pool as well as those that continue to take whole NXX codes. We note that the INC Pooling Guidelines complement our choice of implementing a nationwide thousands-block number pooling rollout. We therefore direct the industry and the national Pooling Administrator to follow the INC Pooling Guidelines relating to the functioning of the Pooling Administrator and

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[438] *See* MCI WorldCom reply comments at 14 (stating that software with EDR will be a major advance over NPAC Release 1.4); SBC comments at 79 (noting that it is essential that all carriers implement EDR). *See also* NANC Meeting Minutes, June 23-24, 1998, at 5.

[439] The NANC recommended that the INC Thousand Block Pooling Guidelines be followed for the administration of thousands-block number pooling. *See* NANC Recommendation, Thousands Block Pooling Administration, Letter to Chief, Common Carrier Bureau, dated February 25, 2000.

[440] *See* AT&T comments at 50; Ameritech comments at 49; BellSouth comments at 8; USTA comments at 10.

[441] *See* Cox comments at 14 (stating that the industry position has largely been driven by the ILECs' desire to control numbering resources); MediaOne comments at 24 (generally supporting the draft Thousand Block Pooling Guidelines and their adoption as Commission rules, but concerned with the loss of thousands-blocks deemed lacking sufficient activity under the guidelines); North Carolina Commission comments at 15 (stating that voluntary industry guidelines have proven to be ineffective, in many instances, in giving numbering resource administrators the authority they need to appropriately administer number resources).

entities requesting numbering resources from the Pooling Administrator.[442] We reserve the right, however, to direct the incorporation of modifications to the Guidelines as and when necessary. In addition, anything that we mandate in this or subsequent orders that alters the Thousand Block Pooling Guidelines, shall supersede the guidelines, and must be followed by the Pooling Administrator.

4. Public Safety Impacts

184. In the *Notice*, we solicited comment on whether the National Emergency Number Association (NENA)-recommended standards, as well as the T1S1.6 recommended restriction on the porting of E911 routing numbers, are sufficient to ensure the reliable provision of E911 service where thousands-block number pooling is implemented.[443] We sought this information because several commenters to the NANC Report expressed concern about thousands-block number pooling's impact on the provision of E911 services, and upgrades and changes to E911 systems if thousands-block number pooling is implemented.[444]

185. In response to comments received from the NENA community regarding the potential problems with implementing thousands-block number pooling in a geographic area beyond the traditional rate center,[445] we conclude that each thousands block pool should be confined to a rate center, which denotes the smallest geographic area used to distinguish rate center boundaries.[446] Thus, each rate center would contain a separate pool of numbering resources. This architecture will allow the maintenance of current wireline call rating mechanisms associating an NXX with a particular geographic area (*i.e.*, rate center).

186. Because thousands-block number pooling will be limited to the traditional rate center area, we do not envision widespread disruption to E911 service in this country. Moreover, we also note that the T1S1.6 did not specifically identify any impact on the provision of E911 service associated with the implementation of thousands-block number pooling in their Technical

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[442] We have considered the amendments to the Thousand Block Pooling Guidelines that were proposed by several states on January 20, 2000, and at this time, decline to adopt them. Therefore, state public utility commissions must follow the provisions of the Thousand Block Pooling Guidelines that we adopt in this *Report and Order*.

[443] *Notice*, 14 FCC Rcd at 10401.

[444] *Id.* at 10400-01. In its Technical Requirements for Number Portability - Switching Systems, T1S1.6 recommends against the porting of routing numbers to which E911 calls are translated. This is because the call-back to a ported number is handled best whenever the call-back is over a dedicated trunk between the Public Safety Answering Point Switch and the originating switch. *See* ATIS T1S1.6 Working Group Technical Requirements for Number Portability - Switching Systems at 48.

[445] *See, e.g.*, NENA comments at 2 (recommending number pooling within the traditional rate center as the approach that is the least disruptive to E911 systems); Illinois NENA reply comments at 2 (explaining that thousands-block number pooling, like LNP, can cause default routing problems if the rate center involves more than one incumbent local service provider).

[446] *See* Thousand Block Pooling Guidelines at § 1.

Requirements for thousands-block number pooling.[447] We do, however, ask that routing numbers to which E911 calls are translated not be ported.[448] If the routing number to which the E-911 calls are translated is ported, we ask that a new 911-routing number be assigned to the recipient switch, if necessary.[449] Therefore, we conclude that the NENA-recommended standards, as well as the T1S1.6 recommended restriction on the porting of E911 routing numbers are sufficient to ensure the reliable provision of E911 service where thousands-block pooling is implemented.

187. Commenters also recommended that NeuStar's Interactive Voice Response (IVR) unit be implemented nationally to address telephone company identification problems.[450] IVR is a system that would enable a PSAP (public service access point) to access the NPAC data, which indicates what company owns each ported telephone number. Because of its potential impact on accessibility to telecommunications services, we decline to address the nationwide implementation of IVR in this *Report and Order*. We do, however, reserve the right to implement this requirement in future proceedings.

5. Administration

a. Inventory of Numbers

188. According to the Thousand Block Pooling Guidelines, the industry inventory is a reservoir of unallocated thousands blocks administered by the Pooling Administrator for purposes of assignment to certified service providers participating in thousands-block number pooling.[451] The service provider inventory is defined as the inventory of all geographic NANP telephone numbers distributed by the thousands-block number Pooling Administrator to a code or block holder and reported as assigned numbers.[452] In the *Notice*, we sought comment on whether a nine-month inventory of numbers in both the industry inventory and the service provider inventory, as proposed in the Thousands Block Pooling Guidelines, is appropriate to assure adequate access to numbering resources, while avoiding potential waste of the resources by permitting numbers to lie unused for long periods of time.[453] According to the Guidelines, the Pooling Administrator would attempt to maintain thousands-blocks in the pool sufficient for a

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[447] *See* T1S1.6 Thousands-Block Number Pooling Technical Requirements at § 5.0.

[448] *See* ATIS T1S1.6 Working Group Technical Requirements No. 2 for Number Portability – Switching Systems at 49.

[449] A routing number is a telephone number used to support routing of E911 calls.

[450] APCO and NENA reply comments at 3; Illinois NENA reply comments at 5-6.

[451] *See* Thousand Block Pooling Guidelines at § 14.0.

[452] *Id.*

[453] *Notice*, 14 FCC Rcd at 10405. *See also*, Thousand Block Pooling Guidelines at § 8.0. The CO Code Assignment Certification Worksheet-TN Level (Months-to-Exhaust) requests data on telephone numbers available for assignment, growth history for the past 6 months, and projected demand for the coming 12 months.

nine-month inventory,[454] and each service provider would maintain sufficient resources within its individual inventory to last for nine months.[455]

189. Inventory refers to all telephone numbers distributed, assigned, or allocated to a service provider, or to a Pooling Administrator for the purpose of establishing or maintaining a thousands-block number pool. We believe that a six-month inventory is appropriate and sufficient to assure adequate access to numbering resources, and will reduce the potential waste of unused numbering resources. Several commenters have suggested nonetheless that a nine-month inventory of numbers in both the industry inventory and service provider inventory is appropriate.[456] We are persuaded by this aspect of the states' proposed modifications to the INC Thousand Block Pooling Guidelines and, therefore, adopt a six-month inventory of numbers in both the industry inventory and service provider inventory. Many state public utility commissions have also taken steps in the context of state number pooling trials to avoid potential waste of numbering resources by requiring a maximum six-month inventory of numbers in both the industry inventory and service provider inventory. We also are persuaded by NeuStar's representation that as the thousands-block Pooling Administrator in the state thousands-block number pooling trials, it could maintain a six-month inventory of numbers in each pool.[457]

b. Donation of Thousands-Blocks

190. As discussed in the *Notice*, the NANC Report and the INC Thousand Block Pooling Guidelines contemplate the donation of thousands-blocks already assigned to a service provider to the pool.[458] Both the NANC Report and INC Number Pooling Report recommend that carriers donate thousands-blocks with up to a ten percent threshold contamination level to a

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[454] According to the Thousand Block Pooling Guidelines, the quantity of the thousands blocks in the industry inventory pool should be determined by the Pooling Administrator based upon: "(a) the number of SPs [Service Providers] participating in a given rate area; (b) the individual forecasts provided by each of the thousand block pooling participants; (c) the anticipated rate of assignment of the thousand blocks within the industry inventory pool; and (d) a minimum inventory of at least six months in the industry inventory pool at all times." *See* Thousand Block Pooling Guidelines at § 8.0.

[455] *See* Thousand Block Pooling Guidelines at § 9.3.4.

[456] *See* Ameritech comments at 49 (stating that a nine-month inventory of numbers struck the proper balance between having a sufficient inventory of numbers to operate and waste of the numbering resource); AT&T comments at 53 (stating that carriers require at a minimum a six-month inventory of numbers to operate efficiently, and that a nine-month inventory could be reduced after carriers and the Pooling Administrator have more experience with the pooling process). *But see*, SBC comments at 80 (stating that a six-month inventory of numbers in both the industry inventory and service provider inventory is appropriate); Massachusetts Commission, Attachment A, Outline of State Response to Numbering NPRM at 15 (recommending a six-month inventory of numbers currently required under the guidelines for jeopardy situations).

[457] Letter from Leonard S. Sawicki, NeuStar, to Magalie Roman Salas, FCC, dated December 21, 1999.

[458] *See* NANC Report at § 5.7.3; *see also* Thousand Block Pooling Guidelines at §§ 4.1, 8.2.4-8.2.8. Whereas donation refers to the process by which carriers are required to contribute telephone numbers to the thousands-block number pool, reclamation refers to the process by which service providers are required to return numbering resources to the NANPA or Pooling Administrator.

pool within a rate center.[459] Contamination occurs when at least one telephone number is not available for assignment. In the *Notice*, we asked whether setting a ten percent contamination threshold would harm a particular segment of the industry.[460] We also sought comment on MediaOne's proposal to set a twenty-five percent contamination threshold for ILECs and a ten percent threshold for CLECs to compensate for the perceived competitive advantage in favor of ILECs because of the ILECs' numbering resources resulting from their historical monopoly status.[461]

191. We conclude that we should adopt a uniform contamination threshold for all carriers to avoid a discriminatory impact on any particular segment of the telecommunications industry.[462] We decline to adopt the recommendations made by MediaOne and other carriers that different contamination thresholds should apply for each industry segment because of the potential competitive impact of such unequal treatment.[463] We also find that donation of thousand-blocks with up to a ten percent contamination threshold has the potential to add significant numbering resources in areas where thousands-block number pooling has been implemented.[464] Thus, consistent with the INC Thousand Block Pooling Guidelines, we require all carriers to donate all thousands-blocks that have a less than ten-percent contamination level to the thousands-block number pool for the rate center from which the numbering resources are assigned.[465] We clarify, however, that carriers participating in thousands-block number pooling will be allowed to retain at least one thousands-block per rate center, even if the thousands-block is less than ten percent contaminated, as an initial block or "footprint" block so that it may

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[459] *See* NANC Report at § 5.7.3; Thousand Block Pooling Guidelines at §§ 4.1, 8.2.4-8.2.8. A "contaminated block" of numbers, in relation to thousands-block number pooling, refers to a block of 1,000 numbers, in which at least one telephone number is not "available" for assignment (*i.e.*, encompassing the categories of *assigned*, *aging*, *administrative*, *reserved*, and *intermediate*).

[460] *Notice*, 14 FCC Rcd at 10403.

[461] *Id.* at 10404. *See also* MediaOne comments at 23-24.

[462] *See, e.g.*, USTA comments at 10 (stating that contamination levels must be consistent for the various industry segments, otherwise any contamination level would be discriminatory).

[463] *See, e.g.*, RCN comments at 14 (stating that the contamination level for ILECs should be greater than the threshold imposed on CLECs to ensure that both classes of carriers are affected while still allowing for competitive growth). *But see* AT&T comments at 44 (arguing that carriers recommending higher contamination levels fail to take into account that more highly contaminated blocks would require significantly more administrative effort). In their comments, several state pubic utility commissions also agreed with a ten percent contamination level but emphasized that states should be given the flexibility of increasing this threshold depending on circumstances particular to that state. *See* California Commission comments at 35; Texas Commission comments at 37; Maine Commission comments at 25; Massachusetts Commission, Attachment A, Outline of State Response to Numbering NPRM at 15.

[464] *Notice*, 14 FCC Rcd at 10403.

[465] The Thousand Block Pooling Guidelines dictate the various responsibilities of the Block Holder and the Pooling Administrator with respect to the reclamation and return of thousands blocks under a thousands-block number pooling arrangement. *See* Thousand Block Pooling Guidelines §§ 4.1, 8.2.4-8.2.8, 10.0.

provide service to its customers within the rate center. Carriers will also be allowed to retain a sufficient number of thousands-blocks to meet its six-month projection forecast. We also clarify that numbers assigned to customers from donated thousands-blocks that are contaminated will be ported back to the donating carrier to enable it to continue to provide service to those customers.

6. Federal Cost Recovery Mechanism

192. Section 251(e)(2) requires that "[t]he cost of establishing telecommunications numbering administration arrangements and number portability shall be borne by all telecommunications carriers on a competitively neutral basis as determined by the Commission."[466] Based on our conclusion in the *Notice* that thousands-block number pooling is a numbering administration function that is subject to the Commission's authority under section 251(e)(2), we sought comment on the appropriate distribution and recovery mechanism for thousands-block number pooling costs.[467]

193. In this *Report and Order*, we adopt cost recovery principles that are similar to those established for number portability.[468] We conclude that the technical requirements of thousands-block number pooling and number portability are very similar, and thus, adopting different methods of cost recovery would create an unnecessary administrative burden on the carriers and the numbering administrator. For example, both number portability and thousands-block number pooling require the administrative services of a neutral third party to maintain the databases. Also, the thousands-block number Pooling Administrator will require updates from the number portability databases. In addition, the modifications to a carrier's network that are

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[466] 47 U.S.C. § 251(e)(2).

[467] *Notice*, 14 FCC Rcd at 10405-06.

[468] Many parties recommend that we follow the cost recovery approach we adopted in the number portability proceeding. *See* Ameritech comments at 51; AT&T comments at 54-55; Bell Atlantic comments at 33-34; BellSouth comments at 25; MCI WorldCom comments at 53; Qwest Communications comments at 10-12; U S WEST comments at 25-26. In the *LNP Third Report and Order* and *Cost Classification Order*, we established rules governing long-term number portability cost recovery. Telephone Number Portability, *Third Report and Order*, 13 FCC Rcd 11701 (1998) (*Telephone Number Portability Third Report and Order*); Telephone Number Portability Cost Classification Proceeding, *Memorandum Opinion and Order*, 13 FCC Rcd 24495 (1998) (*Cost Classification Order*). We concluded that section 251(e)(2) authorizes the Commission to ensure that carriers bear the costs of providing long-term number portability on a competitively neutral basis for both interstate and intrastate calls. *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11719; *Cost Classification Order*, 13 FCC Rcd at 24496. We further concluded that an exclusively federal recovery mechanism for long-term number portability will enable the Commission to satisfy most directly its competitive neutrality mandate and will minimize the administrative and enforcement difficulties that might arise were jurisdiction over number portability divided. Under the exclusively federal cost recovery mechanism, the number portability costs incurred by incumbent LECs are not subject to jurisdictional separations. *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11719. In the *Telephone Number Portability Third Report and Order*, we further concluded that the costs of number portability that carriers must bear on a competitively neutral basis include the costs that LECs incur to meet obligations imposed by section 251(b)(2), as well as the costs other telecommunications carriers, such as IXCs and CMRS providers, incur for the industry-wide solution to providing number portability. *Id.* at 11719-20. We also concluded that section 251(e)(2) applies to any distribution of number portability costs among carriers as well as the recovery of those costs by carriers. *Id.* at 11724-25.

necessary to implement thousands-block number pooling will involve the same, or similar hardware and software modifications that were required to implement number portability, thus creating the same or similar types of costs. Moreover, in the *LNP Third Report and Order* we noted that number portability would facilitate thousands-block number pooling to help forestall telephone number exhaust.[469]

194. We establish a competitively neutral federal cost recovery frame work for thousands-block number pooling. In this regard, we adopt three categories of thousands-block number pooling costs and determine how those costs should be allocated in each category. We, however, do not establish a cost recovery mechanism in this *Report and Order* for shared industry and carrier-specific costs directly related to thousands-block number pooling because the record does not contain adequate information regarding the range and magnitude of incremental costs that carriers will incur to implement thousands-block number pooling. Thus, any determination of an appropriate cost recovery mechanism without information regarding the amount and/or magnitude of incremental costs that are associated with thousands-block number pooling implementation would be speculative. For this reason, we also issue a *Further Notice* seeking comment on the shared industry and carrier-specific incremental costs of thousands-block number pooling and cost studies to quantify those incremental costs.

a. Federal/State Jurisdiction

195. In the *Notice*, we concluded that thousands-block number pooling is a numbering administration function and tentatively concluded that section 251(e)(2) of the Communications Act of 1934, as amended, authorizes the Commission to provide an exclusively federal distribution and recovery mechanism for both intrastate and interstate costs of thousands-block number pooling.[470] We further tentatively concluded that under an exclusively federal numbering administration cost recovery mechanism, the incumbent LECs' numbering administration costs, including costs associated with thousands-block number pooling, will not be subject to separations.[471]

196. We conclude that the costs of numbering administration, specifically the costs of thousands-block number pooling, will be recovered through an exclusively federal recovery mechanism. We agree with parties who maintain that the Commission has authority to provide an exclusively federal distribution and recovery mechanism for the intrastate and interstate costs of thousands-block number pooling.[472] We also believe that an exclusively federal cost recovery and distribution mechanism will further the policy goal of ensuring that numbering

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[469] *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11774.

[470] *Notice*, 14 FCC Rcd at 10405.

[471] *Id.* at 10406.

[472] Ameritech comments at 50; AT&T comments at 53; BellSouth comments at 25; MCI WorldCom comments at 50; New Jersey Commission comments at 7; Qwest comments at 11.

administration costs are not in conflict with the pro-competitive goals of the Act.[473] In addition, an exclusively federal cost recovery mechanism for thousands-block number pooling will enable the Commission to satisfy most directly its competitively neutral mandate, and will minimize the administrative and enforcement difficulties that might arise if jurisdiction over numbering administration cost recovery were divided. We also note that no party has proposed a methodology which would ensure that numbering administration costs are recovered on a competitively neutral basis when carriers operate under different recovery mechanisms.

197. We also adopt our tentative conclusion that the costs of thousands-block number pooling are not subject to separations under the exclusively federal cost recovery mechanism. As a federal cost recovery mechanism, the costs incurred are interstate costs, so there are no intrastate costs to be allocated to the state jurisdiction. Therefore, we will allow incumbent LECs to recover all their qualifying costs for thousands-block number pooling under the federal cost recovery mechanism we establish. We note, however, that the implementation and administration of national thousands-block number pooling will not be effective immediately. Until national thousands-block number pooling is implemented and a federal cost recovery mechanism authorized, states may use their current cost recovery mechanisms to ensure that the carriers recover the costs of thousands-block number pooling implementation and administration in the meanwhile. Costs incurred by carriers to implement state-mandated thousands-block number pooling are intrastate costs and should be attributed solely to the state jurisdiction.

b. Competitively Neutral Requirement

198. We tentatively concluded in the *Notice* that the plain language of section 251(e)(2) requires that the costs of thousands-block number pooling implementation be borne by all telecommunications carriers on a competitively neutral basis.[474] We sought comment on whether the two-part test we adopted in the number portability proceeding to determine whether carriers should bear the costs of number portability on a competitively neutral basis is applicable to thousands-block number pooling.[475] Specifically, we tentatively concluded that the costs of thousands-block number pooling: (a) should not give one provider an appreciable, incremental cost advantage over another when competing for a specific subscriber; and (b) should not have a disparate effect on competing providers' abilities to earn a normal return.[476]

199. We apply the two-part test we established in the *LNP Third Report and Order* to determine whether the carriers' costs are borne on a competitively neutral basis. In that order, we concluded that section 251(e)(2) requires us to ensure that the costs of number portability do not affect the ability of carriers to compete and to attract subscribers.[477] We applied the "normal

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[473] *See* Ameritech comments at 50; AT&T comments at 53; BellSouth comments at 25; MCI WorldCom comments at 50; New Jersey Commission comments at 7; Qwest comments at 11.

[474] *Id.* at 10406.

[475] *Id.* at 10406-07.

[476] *Id.; see also Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11731-32.

[477] *Id.* at 11732.

return" prong of the test to all carriers, not just carriers that compete for end-user customers.[478] Several commenters support the application of the two-part test to determine whether carriers should bear the costs of thousands-block number pooling,[479] and no party has demonstrated that this test would create an unreasonable or unjust result. Therefore, we conclude that the costs of numbering administration, including thousands-block number pooling, do not affect the ability of carriers to compete. As such, the costs of thousands-block number pooling: (a) should not give one provider an appreciable, incremental cost advantage over another when competing for a specific subscriber; and (b) should not have a disparate effect on competing providers' abilities to earn a normal return. Also, consistent with our position in the *LNP Third Report and Order*, we conclude that section 251(e)(2) does not exclude any class of carriers and that all telecommunications carriers must bear numbering administration costs on a competitively neutral basis.[480]

200. We also conclude that the competitive neutrality requirement does not require the Commission to ensure that carriers recover all of the costs expended for thousands-block number pooling implementation and administration. We note that neither the application of the two-part test to thousands-block number pooling costs nor our interpretation of section 251(e)(2) guarantees any particular return or requires the Commission to guarantee that carriers recover all their thousands-block number pooling costs.[481] Section 251(e)(2) requires that the Commission select a method of cost recovery that ensures that carriers bear the costs on a competitively neutral basis, in comparison with the way other carriers bear the same costs. In the *LNP First Report and Order*, the Commission stated that Congress's competitive neutrality mandate requires the Commission to depart from cost-causation principles when doing so is necessary to ensure "that the costs of number portability borne by each carrier do not affect significantly any carrier's ability to compete with other carriers for customers in the marketplace."[482]

c. Cost Categories

201. In the *Notice*, we sought comment on three categories for recovery of thousands-block number pooling administration costs: (1) shared industry costs, costs incurred by the industry as a whole (including NANP administrator costs, and enhancements to the number portability regional database); (2) carrier-specific costs directly related to thousands-block number pooling implementation (such as enhancements to carriers' SCP, LSMS, SOA, and OSS

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[478] *Id.*

[479] Ameritech comments at 51; MCI WorldCom comments at 51-52; OPASTCO comments at 6; Qwest comments at 11; USTA reply comments at 19.

[480] *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11731. We note that the *Telephone Number Portability First Report and Order* interpreted the term "all telecommunications carriers" in section 251 to include any provider of telecommunications service. *Telephone Number Portability First Report and Order*, 11 FCC Rcd at 8419.

[481] *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11732-33.

[482] *Telephone Number Portability First Report and Order*, 11 FCC Rcd at 8419.

systems); and (3) carrier-specific costs not directly related to thousands-block number pooling administration.[483] The NANC also identified these cost categories as appropriate for thousands-block number pooling costs in its report.[484] In addition, we tentatively concluded that section 251(e)(2)'s competitively neutral requirement applies only to the allocation and recovery of shared industry costs and carrier-specific costs directly related to the implementation of thousands-block number pooling, not to carrier-specific costs not directly related to thousands-block number pooling.[485] Further, we sought comment on the tentative conclusion that because costs not directly related to providing thousands-block number pooling are not costs of thousands-block number pooling implementation, the Commission is not required to create special provisions for their recovery.[486]

202. Furthermore, in the *LNP Third Report and Order*, we established definitions for the three cost categories described above as they applied to number portability cost recovery. We defined shared costs as "costs incurred by the industry as a whole, such as those incurred by the third-party administrator to build, operate, and maintain the databases needed to provide number portability."[487] Carrier-specific costs directly related to providing number portability were defined as costs carriers incur specifically in the provision of number portability services, such as for the querying of calls and the porting of telephone numbers from one carrier to another and considered, as subject to the competitive neutrality mandate of section 251(e)(2), all of a carrier's dedicated number portability costs, such as for number portability software and for the SCPs, and STPs reserved exclusively for number portability.[488] We also defined carrier-specific costs directly related to the provision of number portability as that portion of a carrier's joint costs that is demonstrably an incremental cost that carriers incur in the provision of long-term number portability.[489] Costs that carriers incur as an incidental consequence of number portability (Type 3), such as general network upgrades, were included in the definition of costs not directly related to the provision of number portability.[490]

203. We adopt the three categories of thousands-block numbering pooling costs that we proposed in the *Notice*. We note commenters generally support the adoption of these the three categories, but disagree as to the categories of costs the carriers should be allowed to

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[483] *Notice*, 14 FCC Rcd at 10407.

[484] *See* NANC Report at §§ 5.3.2.4, 5.3.2.7 – 5.3.2.11, 5.3.2.13, 5.3.2.17, 5.6.1, 5.6.3 – 5.6.4.

[485] *Notice*, 14 FCC Rcd at 10408.

[486] *Id.*

[487] *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11739.

[488] *Id.* at 11740.

[489] *Id.*

[490] *Id.*

recover.[491] We find that the similarities between the costs that will be incurred to implement thousands-block number pooling and the costs that have been identified for number portability compel us to adopt the same three cost categories, and apply their definitions to the costs of thousands-block number pooling.

204. We agree with US West and conclude that the costs resulting from the administration of thousands-block number pooling, specifically the costs incurred by the third party thousands-block number Pooling Administrator to build, operate and administer the database for thousands-block number pooling are shared industry costs.[492] Furthermore, as we decided with regard to number portability, we conclude that these costs will become carrier-specific costs once they are distributed among telecommunications carriers.[493] The method of allocating and recovering shared industry costs is discussed in detail below.[494]

205. We further conclude that it is competitively neutral for carriers to recover the shared industry costs and carrier-specific costs directly related to thousands-block number pooling implementation. Finally, we adopt our tentative conclusion that carriers may not recover costs not directly related to providing thousands-block number pooling because these costs are not subject to the competitive neutrality requirement.[495]

d. Allocation of Costs

206. *Shared Industry Costs.* We tentatively concluded in the *Notice* that the shared industry costs of thousands-block number pooling implementation and administration are should be allocated and recovered through the existing NANPA fund formula.[496] We also tentatively concluded that under section 251(e)(2), it is competitively neutral to allocate the shared industry costs of thousands-block number pooling implementation and administration among all telecommunications carriers in proportion to each carrier's intrastate, interstate, and international end-user telecommunications revenues.[497] The *Notice* further sought comment on whether the Commission has the authority to allocate the shared costs of thousands-block number pooling

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[491] Ameritech comments at 51; AT&T comments at 55; BellSouth comments at 25; MCI WorldCom comments at 52; MCI WorldCom reply comments at 28-29; New York Commission comments at 12; SBC comments at 90; U S West comments at 28.

[492] U S West comments at 29.

[493] *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11739. *See* U S West comments at 29.

[494] *See infra* ¶ 207.

[495] *See* New York Commission comments at 12.

[496] *Notice*, 14 FCC Rcd at 10408; *see also* 47 C.F.R. § 51.17 (all telecommunications carriers in the United States shall contribute on a competitively neutral basis to the costs of numbering administration). The NANPA fund formula represents the contribution factor established to determine the amount of each carrier's contribution, based on the carrier's end user revenues, for NANP administration.

[497] *Notice*, 14 FCC Rcd at 10409.

through a per-number charge, based on the quantity of numbers held by a carrier, or only to those carriers that receive thousands-blocks of numbers.[498]

207. We agree with parties stating that the distribution and recovery mechanism for the costs of thousands-block number pooling should be recovered from all classes of telecommunications carriers according to the NANPA formula.[499] We conclude that the allocation of shared industry costs only among the carriers that participate in thousands-block number pooling or through a per-number charge, based on the quantity of numbers held by a carrier, would not comply with the section 251(e)(2) requirement that all telecommunications carriers bear the cost of numbering administration on a competitively neutral basis.[500] In particular, we believe that such a mechanism would penalize new CLECs and other carriers, such as CMRS and paging carriers, that require large quantities of numbers to provide their services.[501] We further conclude that the costs of thousands-block number pooling be allocated to all telecommunications carriers in proportion to each carrier's interstate, intrastate, and international telecommunication end-user revenues. Allocation of thousands-block number pooling costs according to a carrier's interstate, intrastate, and international telecommunication end-user revenues is consistent with the established precedent for cost recovery for NANP administration using the NANPA formula, as well as our cost recovery mechanism for number portability. We recently determined that carrier contributions to NANPA based on end-user telecommunications revenues satisfy the competitive neutrality requirements of section 251(e).[502] In addition, the shared costs for number portability are also collected by a neutral, third-party administrator based on allocations among carriers in proportion to their interstate, intrastate, and international telecommunication end-user revenues attributable to that region.[503] Similar to our number portability cost recovery rules, which require carriers that do not have sufficient end-user revenues to pay $100 per year per region as their statutory share of shared number pooling costs, we require that carriers that do not have sufficient end-user revenues shall pay a minimum of $100 per year per region as their share of thousands-block number pooling costs.[504] The record

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498 *Id.*

499 AT&T comments at 53-55; Bell Atlantic comments at 34; BellSouth comments at 25; Joint Comments of ChoiceOne and GST at 7-8; Connect comments at 18; Cox comments at 16-17; MCI WorldCom comments at 54; SBC comments at 66; Texas Commission comments at 28.

500 Ameritech comments at 51; AT&T comments at 58; Bell Atlantic comments at 34; BellSouth comments at 26; MCI WorldCom comments at 54.

501 Ameritech comments at 51; AT&T comments at 58; Bell Atlantic comments at 34; BellSouth comments at 26; MCI WorldCom comments at 54.

502 In the Matter of 1998 Biennial Regulatory Review – Streamlined Contributor Reporting Requirements Associated with Administration of Telecommunications Relay Services, North American Numbering Plan, Local Number Portability, and Universal Service Support Mechanisms, *Report and Order*, 14 FCC Rcd 16602, 16631 (1999) (*1998 Biennial Review Order*).

503 *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11754.

504 *Id.* at 11759.

in this proceeding does not provide a reason to depart from our established precedent in this area. Therefore, shared industry costs, along with the other carrier-specific costs directly related to thousands-block number pooling, will be subject to the carrier-specific cost recovery mechanism to be established in a separate order.

208. *Carrier-specific costs directly related to thousands-number pooling.* In the *Notice*, we tentatively concluded that it is competitively neutral for carriers to bear and recover their own carrier-specific costs directly related to thousands-block number pooling implementation and administration.[505] These costs include costs associated with updates to carriers' networks (including LSMS, SCP, SOA, and OSS systems), as well as, each carrier's allocated portion of shared industry costs as discussed above.

209. We conclude that requiring carriers to bear and recover their own carrier-specific costs is consistent with the competitive neutrality requirements in section 251(e)(2). Several parties concur, although there is disagreement as to how the costs should be recovered.[506] We note that none of the parties support the alternative method that would add the carrier-specific costs to the shared industry costs and, then, allocate them through a revenue-based cost mechanism. A similar pooling-type method also was considered in the number portability proceeding,[507] but was rejected because of the following disadvantages: (1) carriers would have less incentive to minimize costs because they would not realize all the savings achieved by providing number portability more efficiently; (2) carriers would not be responsible for any increasing cost inefficiencies; and (3) the Commission would be required to impose significant cost accounting and distribution mechanisms on both regulated and previously unregulated carriers.[508] These disadvantages would also be present if the carrier-specific thousand-block number pooling costs were added to the shared industry costs and allocated according to revenue. Parties to this proceeding have not provided information to show us that this method is competitively neutral; therefore, we adopt our earlier conclusion that it is competitively neutral for carriers to bear and recover their own carrier-specific costs. We will address the issue of carrier-specific thousands-block number pooling cost recovery in detail in a subsequent order, but we establish the basic principles that apply to this category of costs below.

210. *Carrier-specific costs not directly related to thousands-block number pooling.* In the *Notice*, we tentatively concluded that carrier-specific costs not directly related to thousands-block pooling implementation should be borne by individual carriers as network upgrades and, as such, are not subject to the competitive neutrality requirements of section 251(e)(2).[509] We

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[505] *Notice*, 14 FCC Rcd. at 10409-10.

[506] AT&T comments at 55-56; Connect comments at 18; Cox comments at 16; MCI WordCom comments at 53.

[507] *Telephone Number Portability First Report and Order*, 11 FCC Rcd at 8464; *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11764.

[508] *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11775-76.

[509] *Notice*, 14 FCC Rcd. at 10411.

sought comment on this conclusion and on alternative methods of recovering these costs.[510]

211. We conclude, with support from several parties, that carrier-specific costs not directly related to thousands-block pooling implementation are not subject to the competitive neutrality requirements in section 251(e)(2).[511] Thus, we find that each carrier should bear its carrier-specific costs not directly related to thousands-block number pooling implementation as network upgrades.[512] Commenters agree that carrier-specific costs not directly related to thousands-block pooling are not subject to the competitive neutrality requirements of section 251(e)(2) and carriers should bear those costs as network upgrades. We reached a similar conclusion regarding carrier-specific costs not directly related to number portability in the *LNP Third Report and Order*, recognizing that carriers may incur a wide range of costs to provide telecommunications functions that are only incidentally related to number portability.[513] The *LNP Third Report and Order* defined costs not directly related to number portability as costs carriers incur as an "incidental consequence of number portability."[514] We reject the argument offered by BellSouth and SBC that we should allow carriers to recover all of the implementation costs for thousands-block number pooling in all three cost categories, including costs not directly related to thousands-block number pooling.[515] We find that these costs are only incidentally related to thousands-block number pooling and the parties have not presented evidence to demonstrate that incidental costs of implementing number pooling should be recovered through a separate or special recovery mechanism. As such, we conclude that carriers are not allowed to recover carrier-specific costs not directly related to thousands-block number pooling implementation and administration through the cost recovery mechanism we establish in a separate order.

e. Recovery of Shared Industry and Direct Carrier-Specific Costs

212. In the *Notice*, we tentatively concluded that incumbent LECs subject to rate-of-return or price cap regulation may not recover their interstate carrier-specific costs directly related to thousands-block number pooling through a federal charge assessed on end-users, but may recover the costs through other cost recovery mechanisms.[516] We requested detailed estimates of the costs of thousands-block number pooling and asked that commenters separate

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[510] *Id.*

[511] MCI WorldCom comments at 53; New York Commission comments at 12; Texas Commission comments at 29.

[512] MCI WorldCom comments at 53; New York Commission comments at 12; Texas Commission comments at 29.

[513] *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11724.

[514] *Id.* at 11740.

[515] BellSouth comments at 25; SBC comments at 88.

[516] *Notice*, 14 FCC Rcd at 10410.

the estimates by category of costs.[517] We also sought comment on the appropriate methodology for developing these and other cost estimates.[518]

213. Several parties agree with the tentative conclusion that thousands-block number pooling costs should not be recovered through a federal charge assessed on end users, but should be recovered through access charges.[519] Some commenters recommend that price cap LECs should be allowed to treat thousands-block pooling number costs as exogenous cost adjustments or, alternatively, place the costs in a new or existing price cap basket.[520] Other parties, however, urge us to abandon our tentative conclusion because recovery through access charges would violate the competitive neutrality standard of section 251(e)(2).[521]

214. We find that the amount and detail of the data provided in response to our request is insufficient for us to determine the amount and/or magnitude of the costs associated with thousands-block number pooling. Without sufficient cost data, it is difficult for us to determine the appropriate cost recovery mechanism for these costs. We, therefore, find it necessary to request additional cost information prior to making a final decision on the appropriate method of cost recovery. We seek further comment and cost studies that quantify shared industry and direct carrier-specific costs of thousands-block number pooling. We also seek comment and cost studies that take into account the cost savings associated with thousands-block pooling in comparison to the current numbering practices that result in more frequent area code changes.

f. Identification of Costs

215. We believe that the implementation of thousands-block number pooling as a means of preventing number exhaust will result in certain cost efficiencies that do not inure to carriers under other methods (*e.g.*, area code splits and overlays, addition of another digit). We request that carriers determine their potential cost savings resulting from thousands-block number pooling by analyzing the avoided costs associated with thousands-block number pooling in comparison to the current practices that result in more frequent area code changes. The carriers also should include an analysis of the differences between the shared industry costs associated with thousands-block number pooling and the shared industry costs, if any, associated with the current practices that result in more frequent area code changes. The carriers should also exclude any thousands-block number pooling costs that they may have recovered through state implemented cost recovery mechanisms from this analysis. After determining their incremental costs of thousands-block number pooling, carriers should offset these costs by the

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[517] *Id.* at 10407-08.

[518] *Id.*

[519] NECA comments at 2; New Hampshire Commission comments at 18; New York Commission comments at 12; Ohio Commission comments at 35.

[520] *See* Cox comments at 17; USTA comments at 11; U S West comments at 34 (stating that ongoing costs of number pooling should be recovered through an ongoing exogenous adjustment).

[521] MCI WorldCom comments at 53.

cost savings that result from thousands-block number pooling which prolongs lives of area codes and avoids frequent area code changes.

216. Carriers should provide cost studies that assign costs according to the three categories we have adopted in this order: (1) shared industry costs; (2) carrier-specific costs directly related to thousands-block pooling; and (3) carrier-specific costs not directly related to thousands-block number pooling. The cost studies should also distinguish the costs of providing number portability from the costs of implementing thousands-block number pooling. We find that the need to distinguish thousands-block number pooling costs from other network upgrades and network changes associated with number portability is heightened by the fact that the changes to the network for both thousands-block number pooling and number portability are similar.[522] Specifically, the same carriers that were required to update their networks to accommodate number portability are now required to make similar changes to implement thousands-block number pooling. Moreover, these carriers are also currently recovering number portability costs through a separate, number portability end-user charge. Under these circumstances, we find that it is equally as important to prevent the overrecovery of thousands-block number pooling and number portability costs as it is to prevent the recovery of costs that are not directly related to thousands-block number pooling.

217. We note that there are some types of costs that are incidental to the implementation and administration of thousands-block number pooling, and, therefore, may not be eligible for recovery. In the *Cost Classification Order*, the Bureau directed the LECs to use the "but for" test as a method of identifying eligible number portability costs.[523] To demonstrate that costs are eligible for recovery through the federal number portability charges under the "but for" test, a carrier must show that the costs: "(1) would not have been incurred by the carrier 'but for' the implementation of number portability; *and* (2) were incurred 'for the provision of' number portability service.[524] The Bureau reasoned that, based on the *Third Report and Order* language that only incremental costs of number portability should be recovered through the federal number portability charges, this test was consistent with the Commission's narrow interpretation of "eligible number portability costs."[525] Costs that a carrier incurs for general network upgrades or to adapt other systems to the presence of number portability in the LECs' network were defined as costs not directly related to the provision of number portability.[526] The Bureau's goal was to prevent overcompensation of LECs for the costs of general network

[522] According to industry reports, number portability technology has extended the life of the North American Numbering Plan by allowing service providers to transfer and share telephone numbers between each other in blocks of 1,000 rather than 10,000-number blocks. *See* Ganek, *Leveraging LNP,* Telephony, February 7, 2000.

[523] *Cost Classification Order*, 13 FCC Rcd at 24500.

[524] *Id.*

[525] *Id.*

[526] *Id.* at 24501.

upgrades that are already recovered through standard price caps and rate-of-return mechanisms.[527]

218. We find that the "but for" test used in the number portability proceeding should also be used by carriers to identify carrier-specific costs directly related to thousands-block number pooling implementation and administration. Our goal in this proceeding is similar to the Bureau's goal in structuring the "but for" test to identify eligible costs of number portability—to prevent carriers from overrecovering both their number portability or thousands-block number pooling costs. We adopt, therefore, the two-part "but for" test described above as a method of identifying the costs that are directly related to thousands-block number pooling. Costs that both would not have been incurred by the carrier "but for" the implementation of thousands-block number pooling *and* were incurred "for the provision of" thousands-block number pooling are eligible for recovery and should be identified in the cost studies.

219. We note that in addition to meeting the requirements of the "but for" test, only new costs should be identified in the cost studies as carrier-specific costs directly related to thousands-block number pooling.[528] We find that it is reasonable to bar recovery of costs incurred by incumbent LECs prior to number pooling implementation and conclude that permitting embedded investments to be eligible thousands-block number pooling costs would permit recovery of costs that are already subject to recovery through standard mechanisms. In the number portability proceeding, we classified the carrier-specific costs directly related to number portability into three basic categories: (1) dedicated number portability costs; (2) joint costs of number portability; and, (3) incremental overheads.[529] These categories also apply to thousands-block number pooling costs and will assist carriers in identifying the costs that may be eligible for recovery.

220. *Dedicated Costs.* Dedicated thousands-block number pooling costs are the incremental costs of investments or expenses that are dedicated exclusively to the provision of thousands-block number pooling functions. These costs should be clearly identifiable since no allocation among services is necessary. Shared industry costs should be considered dedicated thousands-block number pooling costs and included in eligible thousands-block number pooling costs. LECs should identify only those costs that are demonstrably incremental costs incurred in the implementation and administration of thousands-block number pooling since existing cost recovery mechanisms already provide for the recovery of embedded costs.

221. *Joint Costs.* Joint costs of thousands-block number pooling are incremental costs associated with new investments or expenses that directly support thousands-block number pooling and also support one or more non-number pooling functions. Our earlier number portability decisions are useful guidance in identifying this category of costs. We concluded in

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[527] *Id.* at 24500.

[528] *Cf. Cost Classification Order*, 13 FCC Rcd at 24502.

[529] *See Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11740; *Cost Classification Order*, 13 FCC Rcd at 24504.

the *LNP Third Report and Order* that an incumbent LEC may treat as directly related to number portability only the "portion of a carrier's joint costs that is demonstrably an incremental cost carriers incur in the provision of long-term number portability."[530] In the *Cost Classification Order*, the Bureau interpreted this language as requiring the LECs to subtract the cost of an item without the number portability functionality from the total costs of the item with the telephone number portability functionality.[531] We adopt, in the context of thousands-block number pooling, the Bureau's definition of joint costs for number portability and its interpretation of the *Third Report and Order's* requirement that an incumbent LEC may treat as directly related to number portability only the portion of a carrier's joint costs that is demonstrably an incremental cost incurred in the provision of number portability implementation. These costs as they relate to thousands-block number pooling should be included in the cost study.

222. The definition of joint costs that we adopt in this proceeding means that carriers should recognize only a portion of the joint costs of software generics, hardware, and OSS, SS7, or AIN upgrades as carrier-specific costs directly related to thousands-block number pooling. Some of the costs associated with changes to these systems to enable number pooling have already been made by the incumbent LEC during the implementation of number portability, which the LECs are recovering through the number portability charges. Moreover, the additional modifications required to implement thousands-block number pooling may also provide a wide range of services and features that are unrelated to number pooling implementation and that are recoverable by the LECs in their rates for other services. Where an upgrade meets the two-part eligibility test and is not dedicated solely to thousands-block number pooling implementation, the LEC should make a special showing in its cost study to establish the eligible thousands-block number pooling costs associated with the upgrade.

223. *Incremental Overheads.* Many of the same principles discussed above regarding identifying direct and joint costs also apply to eligible overhead costs of thousands-block number pooling. We recognized in the number portability proceeding that LECs may incur overhead costs in conjunction with providing number portability and determined that carriers may recovery only those incremental overheads that they can demonstrate they incurred specifically in the provision of number portability.[532] The same rationale applies to thousands-block number pooling costs. We recognize that there are overhead costs associated with the implementation of thousands-block number pooling as a new function in the LECs' networks. However, only new overhead costs that were incurred specifically in the implementation of thousands-block number pooling should be identified in the cost information LECs provide in response to this request.

224. The carriers should not include embedded overheads or use general overhead factors as part of the cost study. We noted with regard to number portability cost recovery that "[c]arriers already allocate general overhead costs to their rates for other services, and allowing

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[530] *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11740.

[531] *Cost Classification Order*, 13 FCC Rcd at 24505.

[532] *Telephone Number Portability Third Report and Order*, 13 FCC Rcd at 11740.

general overhead loading factors . . . might lead to double recovery."[533] This language is instructive in this proceeding. LECs are not precluded, however, from applying *incremental* overhead allocation factors to identify the incremental portion of overhead costs directly related to thousands-block number pooling.

225. Carriers that apply an incremental overhead allocation factor must include a detailed explanation of the method used to calculate the factor as well as the method used to arrive at the estimated overhead amount. In support of the reasonableness of these incremental overhead cost allocations, LECs may be requested to supply to the Commission any special study performed by the LEC, a list of overhead allocation factors used by states in any UNE pricing decision, a list of all overhead allocations used in the LEC's other new service filings during 1998, 1999, and 2000, or three calendar years immediately preceding the LEC's filing, and a list of the incremental overhead factors filed by the LEC for number portability services, if necessary in the course of this proceeding.

226. Dedicated costs are associated with incremental investment exclusively related to thousands-block number pooling. Joint costs are associated with investments used to provide more than one service. As part of their cost study, LECs must provide a worksheet for dedicated and joint costs, as defined in this *Report and Order*, that includes the following information: (a) required thousands-block number pooling function and modification; (b) Part 32 account; (c) gross dollar investment; and (d) the percent assigned to non-number pooling services. LECs should state the methods used to assign that investment, *e.g.,* direct assignment or engineering studies. The thousands-block number pooling functions should include (as reported for each type of service): (a) shared industry costs; (b) service management system (SMS) signalling link; (c) signalling control point (SCP); (d) SCP link; (e) signalling transfer point (STP); (f) STP link; (g) signalling switching point (SSP); (h) end-office switches; (i) tandem switches; (j) operating support system (OSS) modifications for support of the narrowly defined number pooling implementation functions described above; and (k) OSS modifications supporting other functions that the LEC claims are for the implementation and administration of thousands-block number pooling. LECs also should include information in the worksheet that shows the cumulative cost savings resulting from thousands-block number pooling implementation compared to the current practices that result in more frequent area code changes, as well as the cost savings associated with each specific category or function outlined on the worksheet. The worksheet should exclude any costs the LECs may have recovered through state thousands-block number pooling cost recovery mechanisms. Finally, LECs should include other functions or subcategories of information that would assist us in our review of the costs that are being claimed.

V. OTHER POTENTIAL POOLING MECHANISMS

227. Individual telephone number (ITN) pooling and unassigned number porting (UNP) are variations on thousands-block number pooling and involve the allocation of individual telephone numbers within the same NXX to different service providers, and possibly different switches, within the same rate center. Generally, ITN pooling is the same as thousands-block

[533] *Id.* at 24509.

number pooling, only at a more granular level, while UNP is a self-help strategy that allows carriers with numbering resources to make them available to carriers that are short of numbering resources. As with thousands-block number pooling, all 10,000 available numbers in an NXX code are allocated within one rate center, but individual telephone numbers may be allocated to different service providers. With ITN pooling, allocations would be accomplished via a third-party administrator, to coordinate the allocation of individual numbers to a particular service provider with the NPAC. With UNP, however, allocation of individual telephone numbers generally would be accomplished between service providers by using established LNP porting mechanisms, and would not involve a third-party administrator.

228. In the *Notice*, we tentatively concluded not to pursue ITN pooling at this time because the development of technical standards and administrative guidelines for this methodology are in their early stages.[534] Nevertheless, we recognized that ITN appears to offer the greatest potential for eliminating, or nearly eliminating, "stranded" numbers, and stated our support for further study on its use as a numbering resource optimization measure.[535] Moreover, we also sought comment on the associated costs and benefits of migrating from a thousands-block pooling regime to an ITN pooling regime.[536] With regard to UNP, we sought comment on whether we should allow carriers to port unassigned numbers among themselves, and in particular, whether this practice could result in call-routing problems and public safety concerns.[537] In addition, we sought comment on whether state commissions should make the determination to allow carriers to use UNP in a given area.[538] We further sought comment on whether UNP can be used simultaneously with thousands-block pooling, or whether special conditions must be met for the two measures to coexist.[539]

229. In our orders considering state petitions for delegations of authority to implement ITN and UNP, we declined to grant state commissions the authority to implement these two optimization measures.[540] Our determination in this regard was based on the lack of final technical and administrative standards for both these methodologies and the potential for disruptions in carrier systems.[541]

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[534] *Notice*, 14 FCC Rcd at 10384. The NANC Report estimated a four to six year implementation timeframe for ITN pooling after the release of a regulatory order. NANC Report at § 4.3.

[535] *Id.* at 10412-13.

[536] *Id.* at 10413.

[537] *Id.* at 10385.

[538] *Id.*

[539] *Id.* at 10413.

[540] *See, e.g. Massachusetts Delegation Order,* 14 FCC Rcd at 17464-65; *Wisconsin Delegation Order* at ¶¶ 26-27.

[541] *Id.*

230. We reiterate our finding that UNP and ITN are not yet sufficiently developed for adoption as nationwide numbering resource optimization measures and conclude that ITN and UNP should not be mandated at this time.[542] We also remain concerned with the impact of UNP on carriers' ability to control their own number inventories and forecast future numbering needs.[543] We are also concerned with UNP's and ITN's potential impact on companies' switching systems and OSSs mapping logic, if these methodologies lead to significant number porting.[544] Furthermore, we are concerned that implementing UNP now might complicate the effort to move to thousands-block pooling, and carriers' efforts to preserve uncontaminated, or minimally contaminated, blocks of numbers may be undermined.[545] For the aforementioned reasons, we also decline to delegate to state commissions authority to order UNP and ITN in their states.

231. We permit carriers, however, to engage voluntarily in UNP where it is mutually agreeable and where no public safety or network reliability concerns have been identified. Despite arguments raised by parties that even voluntary UNP arrangements will skew utilization forecasting and impact SCP capacity,[546] we conclude that the volume of ported numbers will not likely be high enough to affect carriers' inventories and SCP capacity appreciably. Furthermore, we encourage the states, the National Association of Regulatory Utility Commissioners (NARUC), NANC and INC to continue to study ITN and UNP and forward their recommendations to us by January 1, 2001. We remain interested in the possibility of implementing either of these pooling methodologies as part of the national numbering resource optimization strategy if they are shown to have sufficient promise and feasibility.

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[542] *Notice*, 14 FCC Rcd at 10384. *See also Massachusetts Delegation Order*, 14 FCC Rcd at 17464-65. Several commenters, however, disagree and maintain that we should pursue ITN as our principal numbering resource optimization strategy because of its potential to allocate numbers more efficiently than thousands-block number pooling. *See* MediaOne comments at 29; Colorado Commission comments at 4; Small Business Alliance comments at 10; Maine Commission comments at 23; Minnesota Commission comments at 14; Massachusetts Commission comments at 11.

[543] Ameritech comments at 47; Bell Atlantic comments at 24; CinBell comments at 11; GTE comments at 41-42; Ohio Commission comments at 31; SBC reply comments at 26; WinStar reply comments at 14.

[544] NANC Report at § 6.6.3. UNP and ITN may cause problems with switches that can only accept a limited number of NXX codes, as number inventories will be increasingly composed of random telephone numbers from many different NXX codes. The NANC Report also indicates that many companies' OSSs are designed to accommodate large inventories of telephone numbers, linking each street address to an NPA/NXX combination. *See* NANC Report at § 6.6.4.1. *See also* Nextel comments at 17-19; U S West comments at 16-17; Nextlink reply comments at 13-14; Ameritech comments at 46; AT&T comments at 41, n.92.

[545] WinStar comments at 22; GTE comments at 41; SBC reply comments at 26.

[546] BellSouth comments at 13; AdHoc comments at 10; SBC comments at 92.